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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/814,549	03/31/2004	Pavel Tichy	03AB064	7400
7590	03/16/2006			
Susan M. Donahue Rockwell Automation, Inc., 704-P 1201 South Second Street Milwaukee, WI 53204-2496			EXAMINER PHAM, THOMAS K	
			ART UNIT 2121	PAPER NUMBER

DATE MAILED: 03/16/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 10/814,549	Applicant(s) TICHY ET AL.	
	Examiner Thomas K. Pham	Art Unit 2121	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 31 March 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-30 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-8, 11, 12, 14, 16-19, 22-28 and 30 is/are rejected.
- 7) ☒ Claim(s) 9, 10, 13, 15, 20, 21 and 29 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 21 June 2005 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

First Action on the Merits

1. Claims 1-30 of U.S. Application 10/814,549 filed on 03/31/2004 are presented for examination.

Quotations of U.S. Code Title 35

2. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

3. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

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Claim Rejections - 35 USC § 102

6. Claims 1-8, 11, 12, 14, 16-19, 22-28 and 30 rejected under 35 U.S.C. 102(b) as being anticipated by U.S. Patent No. 6,285,977 ("Miyazaki").

Regarding claim 1

Miyazaki teaches a system for allowing a user to interact with a multi-agent distributed control system (see Col. 3 lines 57-67), the system comprising:

- a computerized terminal on which is displayed a user interface (see Col. 9 lines 48-53), wherein the user interface includes a first window displaying a workflow among a first plurality of agents of the multi-agent system (see Col. 13 lines 45-52).

Regarding claim 23

Miyazaki teaches a distributed control system comprising:

- a network (see Col. 3 lines 48-54);
- a plurality of controllers programmed with a plurality of agents, wherein the controllers are in communication with one another by way of the network (see Col. 4 lines 40-50); and
- a terminal coupled to the network and capable of providing a human machine interface (HMI), wherein the HMI displays a plurality of windows on which are displayed information regarding at least some of the agents (see Col. 9 lines 48-53), a plurality of messages communicated among at least some of the agents, and a workflow occurring among at least some of the agents (see Col. 4 lines 51-60).

Regarding claim 28

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Miyazaki teaches a method of interacting with a multi-agent distributed control system employing a plurality of controllers on which are programmed a plurality of agents, the controllers being coupled by a network (see Col. 3 lines 57-67), the method comprising:

- providing a computer program capable of operating a user interface, wherein the computer program is in communication with the agents via the network (see Col. 4 lines 40-50); and
- displaying agent-related information on the user interface by way of a plurality of windows, wherein within a first of the windows is further displayed a workflow among at least some of the agents (see Col. 9 lines 48-53), and within a second of the windows is further displayed at least one of a plurality of messages communicated among at least some of the agents, a work unit requested by at least one of the agents, and message content associated with at least one of the messages (see Col. 4 lines 51-60).

Regarding claim 2

Miyazaki teaches the workflow is displayed as a tree-type diagram linking a primary agent of the first plurality of agents and at least one secondary agent of the first plurality of agents (see Col. 4 lines 19-26), wherein the primary agent created a work request and the at least one secondary agent performed at least one of planning, commitment or execution of work in response to the work request (see Col. 5 lines 6-26).

Regarding claim 3

Miyazaki teaches the at least one secondary agent includes a second plurality of agents (see Col. 4 lines 51-60).

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Regarding claim 4

Miyazaki teaches the tree-type diagram includes the primary agent, a first layer of the secondary agents that are directly in communication with the primary agent and a second layer of the secondary agents that are directly in communication with the secondary agents of the first layer (see Col. 4 lines 27-39).

Regarding claim 5

Miyazaki teaches the tree-type diagram includes a first plurality of arrows connecting the primary agent to each of the secondary agents of the first layer, and a second plurality of arrows connecting the secondary agents of the first layer with the secondary agents of the second layer, and wherein each of the arrows represents at least one message between a respective pair of the agents (see Col. 10 lines 47-55).

Regarding claim 6

Miyazaki teaches one of the arrows represents a plurality of messages, the messages of the plurality are also listed in the first window (see Col. 8 lines 12-17).

Regarding claim 7

Miyazaki teaches the user interface further includes at least one of: a second window displaying a first list of messages sent between pairs of agents of one of the first plurality of agents and a second plurality of agents of the multi-agent system (see Col. 14 lines 9-20); and a third window displaying a second list of work units requested by at least one of the agents of the first and second pluralities of agents (see Col. 14 lines 20-35).

Regarding claim 8

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Miyazaki teaches the user interface includes both of the first and second windows displaying the first and second lists (see Col. 11 lines 62-67).

Regarding claim 11

Kohn teaches the user interface includes the third window, wherein the third window displays descriptive information along with the listed work units, and wherein the descriptive information includes at least one of work unit identifiers corresponding to the listed work units, names corresponding to the listed work units, numbers of messages belonging to the listed work units, original requesters corresponding to the listed work units, and status indications corresponding to the listed work units (see Col. 12 lines 54-63).

Regarding claim 12

Kohn teaches the user interface additionally includes a fourth window that displays content of at least one selected message (see Col. 14 lines 9-35).

Regarding claim 14

Miyazaki teaches the user interface includes a second window displaying additional information, and wherein the displaying of information in the first and second windows is coordinated so that, when a user input is received in relation to certain information displayed in one of the windows, at least some of the information displayed in the other of the windows is varied (see Col. 13 lines 29-40).

Regarding claim 16

Miyazaki teaches further comprising a filter, wherein the filter is capable of at least one of: causing at least one of the first window and a second window to display only a subset of the first plurality of agents (see Col. 16 lines 1-29); and causing at least one of the first and second

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windows to display only a subset of messages occurring among the first plurality of agents (see Col. 16 lines 15-30).

Regarding claim 17

Miyazaki teaches wherein the user interface is capable of displaying in addition to the first window, a second window that provides information regarding at least one agent characteristic, and wherein the information displayed in the second window is capable of being altered in response to user commands provided by a user input device selected from the group consisting of a mouse, a keyboard, a touch screen, a voice-response unit, a touch pad and an alternate input device (see Col. 13 lines 9-27).

Regarding claim 18

Miyazaki teaches wherein the information regarding the agent characteristic includes at least one of an agent name, an agent address, an agent filtration, an agent status, an amount of debugging information, an agent capability, and a proportional usage, and wherein an alteration in the information can be provided to a related agent of the multi-agent system (see Col. 13 lines 9-27).

Regarding claim 19

Miyazaki teaches wherein the user interface is capable of displaying, in at least one of the first window and a second window, statistical information regarding amounts of communication occurring among the first plurality of agents (see Col. 9 line 60 to Col. 10 line 3).

Regarding claim 22

Miyazaki teaches a memory device on which is stored agent operational information that can be used later by the system when operating in the off-line mode (see Col. 14 lines 48-54).

Regarding claim 24

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Miyazaki teaches wherein the displayed information regarding the workflow occurring among at least some of the agents is displayed in a tree-type format (see Col. 4 lines 19-26).

Regarding claim 25

Miyazaki teaches wherein the information displayed in one of the windows changes when a user input is received causing a change in another of the windows (see Col. 17 lines 15-20).

Regarding claim 26

Miyazaki teaches wherein the plurality of windows includes at least two of a first window that displays a workflow, a second window that displays a list of messages communicated among at least some of the agents, a third window that displays a list of work units, and a fourth window that displays message content (see Col. 12 lines 54-63).

Regarding claim 27

Miyazaki teaches wherein the terminal is further capable of at least one of: modifying the displayed information in accordance with a filter (see Col. 16 lines 1-29); displaying an additional window in which are displayed a plurality of agent characteristics (see Col. 13 lines 29-40); and displaying statistical information regarding communication load (see Col. 9 line 60 to Col. 10 line 3).

Regarding claim 30

Miyazaki teaches wherein the information displayed in one of the first and second windows changes when a user input is received causing a change in the other of the first and second windows (see Col. 17 lines 15-20).

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Allowable Subject Matter

7. Claims 9, 10, 13, 15, 20, 21 and 29 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to examiner *Thomas Pham*; whose telephone number is (571) 272-3689, Monday - Thursday from 6:30 AM - 5:00 PM EST or contact Supervisor *Mr. Anthony Knight* at (571) 272-3687.

Any response to this office action should be mailed to: **Commissioner for Patents, P.O. Box 1450, Alexandria VA 22313-1450**. Responses may also be faxed to the **official fax number (571) 273-8300**.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Thomas Pham
Patent Examiner



March 10, 2006